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JAMES C SCHELLER JR
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP
12400 WILSHIRE BOULEVARD SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER

EDELMAN, BRADLEY E

ART UNIT	PAPER NUMBER
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2153

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11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/698,050

Applicant(s)

TULI, RAJA SINGH

Examiner

Bradley Edelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10, 15-23, 27-34, 37-52 and 57-65 is/are rejected.
7) ☒ Claim(s) 11-14, 24-26, 35, 36, 53-56 and 66-68 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to Applicant's request for continued examination filed on April 26, 2004. Claims 1-68 are presented for further examination.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, all of the claim features, including the claimed steps of receiving, transmitting, sending, etc., must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 7, 20, 31, 49, and 62 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Each of these claims describes that the peripheral device is a

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scanner and the control information can be applied to operate the scanner. However, applicant's specification as originally filed, does not describe how the system would work in combination with a scanner.

The specification only describes a detailed description of how it would be used with a *printer*, and then states that the system may be used for any peripheral, including a scanner. However, because a scanner does not include print jobs, Applicant's description of using the remote device and portable device for a printer is not applicable to a scanner (Applicant has made exactly this argument regarding the Carter reference, which teaches a remote printer driver system but does not disclose a scanner system – see p. 24, last paragraph of Applicant's response filed on April 26, 2004). Thus, Applicant has provided no guidance regarding how the described system would work with a scanner, and a person having ordinary skill in the art would not be enabled to make and/or use Applicant's described system with a scanner. For these reasons, claims 7, 20, 31, 49, and 62 are rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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3. Claims 2, 3, 10, 15, 16, 21, 23, 27, 28, 34, 37, 38, 44, 45, 52, 57, 58, 63, and 65 are rejected under 35 U.S.C. 102(e) as being anticipated by Carter et al. (U.S. Patent No. 6,201,611, hereinafter "Carter").

In considering claim 2, Carter discloses a method to operate a peripheral device ("printer 105"), the method comprising:

Receiving at a server ("server 203") an instruction from a remote device ("thin client 101") to operate the peripheral device (col. 5, lines 29-31, 38-40, wherein the client sends to the server an instruction for controlling the printer by telling it to print), the peripheral device being connected to a port of the remote device (Fig. 3; col. 6, line 5, wherein the "locally attached printer 105" is inherently attached to the thin client via a port);

In response to the instruction, the server:

Generating control information recognizable by the peripheral device when applied to the port (col. 5, lines 55-67, wherein the printer driver at the server creates Printer-Ready Format (PRF) data to be sent to the thin client port); and

Communicating the control information to the remote device for applying onto the port of the remote device to operate the peripheral device under control of the server (col. 6, lines 1-5, wherein the PRF data is sent to the client and causes the client to send it to the printer through the port, such that the printer driver at the server controls the operation of the printer through the client; see also, col. 7, lines 11-13, "The PRF contains the commands and the data that the target printer uses to print the job").

In considering claim 3, Carter further discloses that the server has a device driver, and the remote device (thin client) does not (Fig. 3).

In considering claim 10, Carter further discloses that the control information is transmitted to the remote device via a wireless connection (col. 3, line 50, "wireless device such as a palmtop computer").

In considering claim 15, Carter discloses a method to operate a peripheral device ("printer 105"), the method comprising:

Sending from a remote device ("thin client 101") to a server ("server 203") an instruction to operate the peripheral device (col. 5, lines 29-31, 38-40, wherein the client sends to the server an instruction for controlling the printer by telling it to print), the peripheral device being connected to a port of the remote device (Fig. 3; col. 6, line 5, wherein the "locally attached printer 105" is inherently attached to the thin client via a port); and

Establishing a communication channel to receive control information from the server for applying onto the port of the remote to operate the peripheral device under control of the server, the control information being generated at the server and recognizable by the peripheral device when applied onto the port (col. 5, lines 55-67, wherein the printer driver at the server creates Printer-Ready Format (PRF) data to be sent to the thin client port; col. 6, lines 1-5, wherein the PRF data is sent to the client, and causes the client to send it to the printer through the port, thereby establishing the

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communication channel and allowing the printer driver at the server to control the operation of the printer through the client).

In considering claim 16, Carter further discloses that the server has a device driver, and the remote device (thin client) does not (Fig. 3).

In considering claim 21, Carter further discloses that the peripheral device is a printer ("printer").

In considering claim 23, Carter further discloses that the control information is transmitted to the remote device via a wireless connection (col. 3, line 50, "wireless device such as a palmtop computer").

In considering claim 27, Carter discloses a server ("server 103") to operate a peripheral device ("printer device drivers" control the printers), the server comprising:

Means for receiving an instruction from a remote device to operate the peripheral device (col. 5, lines 29-31, 38-40, wherein the client sends to the server an instruction for controlling the printer by telling it to print), the peripheral device being connected to a port of the remote device (Fig. 3; col. 6, line 5, wherein the "locally attached printer 105" is inherently attached to the thin client via a port);

Means for generating control information which is recognizable by the peripheral device when applied onto the port (col. 5, lines 55-67, wherein the printer driver at the server creates Printer-Ready Format (PRF) data to be sent to the thin client port); and

Means for communicating the control information to the remote device for applying onto the port of the remote device to operate the peripheral device under control of the server in response to the instruction (col. 6, lines 1-5, wherein the PRF data is sent to the client and causes the client to send it to the printer through the port, such that the printer driver at the server controls the operation of the printer through the client).

In considering claim 28, Carter further discloses that the server contains a device driver to generate the control information (Fig. 3; "device drivers 127").

In considering claim 34, Carter further discloses that the control information is transmitted to the remote device via a wireless connection (col. 3, line 50, "wireless device such as a palmtop computer").

In considering claim 37, Carter discloses a portable device ("client") to operate a peripheral device ("printer"), the portable device comprising:

Means for sending to a remote server an instruction to operate the peripheral device (col. 5, lines 29-31, 38-40, wherein the client sends to the server an instruction for controlling the printer by telling it to print), the peripheral device being connected to a

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port of the portable device (Fig. 3; col. 6, line 5, wherein the "locally attached printer 105" is inherently attached to the thin client via a port); and

Means for establishing a communication channel to receive control information from the remote server for applying onto the port of the remote to operate the portable device under control of the remote server, the control information being generated at the remote server and recognizable by the portable device when applied onto the port (col. 5, lines 55-67, wherein the printer driver at the server creates Printer-Ready Format (PRF) data to be sent to the thin client port; col. 6, lines 1-5, wherein the PRF data is sent to the client, and causes the client to send it to the printer through the port, thereby establishing the communication channel and allowing the printer driver at the server to control the operation of the printer through the client).

In considering claim 38, Carter further discloses that the server has a device driver, and the remote device (thin client) does not (Fig. 3).

In considering claim 44, claim 44 presents a machine readable medium for performing the same method as claim 2, and is thus rejected for the same reasons.

In considering claim 45, Carter further discloses that the server contains a software device driver to generate the control information and the remote device contains no software device driver for the peripheral device (Fig. 3).

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In considering claim 52, Carter further discloses that the control information is transmitted to the remote device via a wireless connection (col. 3, line 50, "wireless device such as a palmtop computer").

In considering claim 57, claim 57 presents a machine readable medium for performing the same method as claim 15, and is thus rejected for the same reasons.

In considering claim 58, Carter further discloses that the remote device contains no software device driver for the peripheral device (Fig. 3).

In considering claim 63, Carter further discloses that the peripheral device is a printer ("printer").

In considering claim 65, Carter further discloses that the control information is transmitted to the remote device via a wireless connection (col. 3, line 50, "wireless device such as a palmtop computer").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-5, 17-18, 29, 39-40, 46-47, and 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter.

In considering claims 4, 17, 39, 46, and 59, although the system taught by Carter discloses substantial features of the claimed invention, it fails to disclose that the remote device has no running operating system. Note that Applicant's specification does not disclose how to implement such a remote device without an operating system, but instead just states that Applicant's device does not use one. Nonetheless, Applicant has admitted in Applicant's response filed on April 26, 2004 that, "it is generally known how to implement electronic circuitry to communicate with a remote server, electronic circuitry to decompress and display a compressed image, electronic circuitry to control a display device, and electronic circuitry to receive user input." See page 19 of Applicant's response. Thus, it is well known to run a PDA-type device without an operating system. Given this knowledge, a person having ordinary skill in the art would have readily recognized the desirability and advantages of using PDAs in the system taught by Carter that do not require operating systems, because Carter's system is meant for "thin clients" and thus prefers clients with as little processing capability as possible. Such thin clients require less hardware and less battery power and are thus less expensive and more energy-efficient. Therefore, given Applicant's admission and given the "thin client" system taught by Carter, it would have been obvious for the thin clients taught by Carter to work without operating systems.

In considering claims 5, 29, and 47, Carter discloses a graphical interface at the portable device for specifying user options regarding the image to be printed (col. 6, lines 29-40, “graphics API,” “print options selected by the user”), and applying the options at the server (col. 6, lines 44-47, “the routing information and printer properties are passed with a print job to a print rendering server”). Carter further discloses that the printer driver processes the print information at the server (col. 6, lines 61-67; col. 7, lines 1-12). However, Carter does not describe that the print options image that appears at the portable device is generated at the server and sent from there to the portable device. In other words, Carter only discloses storing printer driver software and performing printer driver functions at the server, instead of additionally storing and processing the printer *application* at the server (Carter describes that the printer applications are stored at the client – see Fig. 3).

Nonetheless, Carter does disclose the use of “thin clients” and further provides motivation for removing large application processes from the thin clients and placing them on the server in order to decrease memory usage at the clients (i.e. Carter does this with respect to the printer driver, see col. 1, lines 30-53). Given this knowledge, a person having ordinary skill in the art would have readily recognized the desirability and advantages of storing the printer application on server, and thus sending print option images from the server to the portable device for selection, in order to further reduce the amount of memory necessary at the client device. Therefore, it would have been obvious to generate the print options taught by Carter at the server, and to send them to the client for selection, as claimed.

In considering claims 18, 40, and 60, these claims include the same limitations as claim 5, and are thus rejected for the same reasons.

6. Claims 1, 6, 8, 19, 30, 32, 41, 48, 50, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter, in view of Koga (U.S. Patent No. 6,646,759).

In considering claims 6, 19, 30, 41, 48, and 61, although the system taught by Carter discloses a one-way communication for allowing the server to control the print job on the printer, it fails to disclose establishing a *two-way* communication channel for communication between the server and the peripheral device through the port of the remote device. Nonetheless, as evidenced by Koga, two-way communications between printer drivers and printers is well known in the art. Koga discloses describes a host system for creating print jobs for a connected printer, wherein two-way communications are enabled between the printer and the printer driver (Abstract; col. 9, lines 57-65; “two-way communication control process”), in order to provide a true WYSIWYG (“what you see is what you get”) confirmation system. See col. 2, lines 15-23. Therefore, it would have been obvious to include the two-way aspects of the printer-driver system taught by Koga in the printer-driver system taught by Carter, so that the user of the remote device could view an accurate representation of what the print job will look like.

In considering claims 8, 32, and 50, Carter further discloses that the device is a printer (Fig. 3).

In considering claim 1, claim 1 includes a computer system for performing the same method steps as claims 2 and 6 combined, and is thus rejected for the same reasons. Claim 1 further describes a first and second software for performing the steps described. The software modules are further disclosed by Carter because software modules are necessary to send the control information via the ports in the system taught by Carter.

5. Claims 22 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter, in view of Eldridge et al. (U.S. Patent No. 6,421,716, hereinafter "Eldridge").

In considering claims 22 and 64, Carter further discloses that the instruction from the remote device requests to print a document; and the server generates the control information according to the document for printing using the printer (col. 5, lines 38-41, 55-65). However, Carter does not disclose that the document is not received from the remote device. Instead, Carter discloses that the document is stored on the client device and is sent to the printer driver at the server for print services. Nonetheless, similar systems that store the actual documents for printing on a server, but still allow a user of a remote device to initiate the print job are well known, as evidenced by Eldridge. In a similar art, Eldridge discloses a system for print services, wherein a user can select print services by browsing documents stored on network hosts via a PDA, and by selecting the documents to print using the PDA. Given this teaching, a person having ordinary skill in the art would have readily recognized the desirability and

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advantages of storing the documents in the system taught by Carter on the server, instead of the PDA, to still allow print selection from the PDA, and at the same time reduce the amount of data stored at the PDA and sent across the network. Therefore, it would have been obvious for the system taught by Carter to not send the document from the remote device to the server, but instead to store the documents at the servers, as taught by Eldridge.

6. Claims 9, 33, 42, 43, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter, in view of Eldridge et al. (U.S. Patent No. 6,421,716, hereinafter "Eldridge").

In considering claims 9, 33, 42, and 51, Carter further discloses that the instruction from the remote device requests to print a document; and the server generates the control information according to the document for printing using the printer (col. 5, lines 38-41, 55-65). However, Carter does not disclose that the document is not received from the remote device. Instead, Carter discloses that the document is stored on the client device and is sent to the printer driver at the server for print services. Nonetheless, similar systems that store the actual documents for printing on a server, but still allow a user of a remote device to initiate the print job are well known, as evidenced by Eldridge. In a similar art, Eldridge discloses a system for print services, wherein a user can select print services by browsing documents stored on network hosts via a PDA, and by selecting the documents to print using the PDA. Given this teaching, a person having ordinary skill in the art would have readily recognized the

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desirability and advantages of storing the documents in the system taught by Carter on the server, instead of the PDA, to still allow print selection from the PDA, and at the same time reduce the amount of data stored at the PDA and sent across the network. Therefore, it would have been obvious for the system taught by Carter to not send the document from the remote device to the server, but instead to store the documents at the servers, as taught by Eldridge.

In considering claim 43, Carter further discloses that the control information is transmitted to the portable device via a wireless connection (col. 3, line 50, "wireless device such as a palmtop computer").

Allowable Subject Matter

7. Claims 11-14, 24-26, 35-36, 53-56, and 66-68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach or render obvious the specific steps claimed in these claims, as they relate to the invention claimed in the independent claims.

Response to Arguments

Regarding Applicant's request for reconsideration filed on April 26, 2004, the following factual arguments are noted:

- a. There is no description of communication in both directions between the server and the printer in Carter.
- b. There is no description in Carter suggesting that the printer 105 is under the control of the server of Carter.
- c. Carter does not disclose the new claim limitation in claim 9 and similar claims that the document is not received from the remote device.
- d. In the context of Carter, there is no evidence that it is advantageous to move the printer application onto the server, as claimed in claim 5 and related claims, since such a modification requires complications in other subsystems and other client and server relations.
- e. Regarding claim 7 and related claims, the teaching of Carter is not generally applicable to a scanner because Carter teaches a network server to translate a print job for the printer of a client.
- f. Regarding claim 11 and related claims, the limitations taught in Carter and Koga do not correspond to all of the claim limitations.

In considering (a), Applicant contends that there is no description of communication in both directions between the server and the printer in Carter. Examiner agrees, and has applied new art in rejecting the pertinent claims.

In considering (b), Applicant contends that there is no description in Carter suggesting that the printer 105 is under the control of the server of Carter. Examiner respectfully disagrees. Notably, Carter discloses a remote printer driver on a server for controlling a print job on a printer. The function of a printer driver is not only to translate print data, but also to control the print job on the printer. For instance, column 7, lines 11-13 of Carter state, "The PRF contains the *commands* and the data that the target printer uses to print the job" (emphasis added). Thus, the PRF of Carter, which is created at the server, does in fact control the printer, since it contains commands.

In considering (c), Applicant contends that Carter does not disclose the new claim limitation in claim 9 and similar claims that the document is not received from the remote device. Examiner agrees and has applied new art in rejecting these claims.

In considering (d), Applicant contends that in the context of Carter, there is no evidence that it is advantageous to move the printer application onto the server, as claimed in claim 5 and related claims, since such a modification requires complications in other subsystems and other client and server relations. Examiner respectfully disagrees. Carter discloses the use of a thin client and further discloses migrating the printer driver to the server. Thus, to minimize CPU usage and storage space at the thin client, which is always desirable on thin clients, it would have been obvious to a person

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having ordinary skill in the art to migrate not only the printer driver software, but other software as well from the thin client to the server.

In considering (e), Applicant contends that regarding claim 7 and related claims, the teaching of Carter is not generally applicable to a scanner because Carter teaches a network server to translate a print job for the printer of a client. While Examiner agrees with this argument, Examiner has now rejected claims 7 and related claims under 35 USC 112, first paragraph under the same rationale as Applicant's argument. Notably, *Applicant's specification*, in the same way as Carter, teaches in specific a network server to translate a print job for the printer of a client, but does not teach how such a system would apply to a scanner. Applicant's specification only mentions that the system can be used for other peripherals besides a printer, and mentions that one such peripheral could be a scanner. But Applicant's printer system is not applicable to a scanner, since scanners do not run print jobs. Thus, Applicant's specification does not give sufficient details to enable one having ordinary skill in the art to make and use the described invention for scanner.

In considering (f), Applicant contends that regarding claim 11 and related claims, the limitations taught in Carter and Koga do not correspond to all of the claim limitations. Examiner agrees, and has objected to these claims as containing allowable subject matter.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is (703) 306-3041. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

For all correspondences: (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Bradley Edelman

BE
June 1, 2004